

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

TQ Delta, LLC,  
*Plaintiff,*

v.

CommScope Holding Company, Inc., *et al.*,  
*Defendants.*

Civil Action No.: 2:21-CV-00310-JRG

JURY TRIAL DEMANDED

**PLAINTIFF TQ DELTA'S  
REPLY MEMORANDUM IN SUPPORT OF ITS MOTIONS FOR  
SUMMARY JUDGMENT DIRECTED TO PATENT FAMILIES 1 AND 10**

## **I. INTRODUCTION**

TQ Delta (“TQD”) replies to “CommScope’s Opposition to Plaintiff TQ Delta’s Motions for Summary Judgment Directed to Patent Families 1 and 10 (Dkt. No. 347)” (Dkt. No. 380).

## **II. REPLY TO DEFENDANTS’ RESPONSE TO THE STATEMENT OF FACTS**

CommScope (“CS”) does not dispute paragraphs 1-12, 17, 18 (in relevant part), 25 or 26.

For ¶¶ 13, 15, and 16, CommScope alleges a failure of proof; however, TQD’s expert opined, “[w]hen two or more Accused Products use the same DSL chipset and the same firmware, or firmware that is not materially different as it relates to the elements of the Asserted Claims, it is my opinion that the DSL functionality of any one of those products will be representative of ... others of those products.” *See e.g.*, Dkt. No. 347-5 at ¶¶129-130 and 133. These opinions are supported by Broadcom’s testimony. *See e.g., id.* at ¶¶152 and 178. CS cites no contrary evidence.

CommScope disputes ¶ 14; however, TQD’s experts have opined that the Broadcom 63168 and 63148 provide the same functionality with respect to VDSL2 single latency with ROC and loop diagnostic mode. *See e.g., id.* at ¶133. These opinions are supported by Broadcom’s testimony. *See e.g., id.* at ¶¶152 and 178. CommScope cites no contrary opinion or evidence.

CS disputes ¶ 19; however, Broadcom’s confirmed that the chips support single latency VDSL with ROC mode and G.INP. Ex. 1 at 160:4-161:2. CS cites no contrary opinion or evidence.

CommScope disputes paragraph 20; however, CS does not explain why.

CommScope does not dispute paragraphs 21-24 but asserts that “compliance” only means “interoperability.” A party claiming compliance with the standards is confirming the products meet every requirement using words such as “must” or “shall.” *See e.g.*, Dkt. No. 347-5 at ¶74 and fn. 15 (citing VDSL2 standard). CS certifies that the accused products are standard-compliant.

## **III. ARGUMENT**

### **A. The Court Should Grant TQ Delta’s Motion on the Family 1 Patent Claim**

# **1. There Is a No Genuine Dispute Compliance Proves Infringement**

CommScope disputes the Family 1 claim reads on the mandatory portions of VDSL2. CS argues that the plain meaning of “DMT symbols that are mapped to one bit of the diagnostic message” is inconsistent with the standard and that the claimed “frequency domain received idle channel noise information” is not the quiet line noise recited in the VDSL2. This lacks merit.

## **a) The Plain Meaning Reads on the VDSL2 Standard**

CommScope does not dispute standard compliance but attempts to distinguish claim 36. CS asserts the claim requires “DMT symbols that are mapped to one bit of the diagnostic message” (hereinafter the “Term”), while the VDSL2 “standard requires modulation ‘using 1 information bit per DMT symbol.’” *Id.* at p. 5. The Court construed under plain meaning, rejecting indefiniteness. Then, CS refused to provide an alternative construction; now, CS attempts to argue a construction that excludes the standard. *Id.* at p. 5 (“Mapping a bit to a symbol involves mapping a discrete piece of information to a larger symbol. Many bits can be mapped to a symbol. In comparison, mapping symbols to a bit would involve mapping larger symbols to a discrete bit.”). This interpretation is contradicted by CS’s expert, Dr. Cimini, who provides three interpretations:

- The diagnostic message includes multiple DMT symbols and each DMT symbol includes only one bit;
- The diagnostic message includes DMT symbols such that one bit is spread across two or more DMT symbols; or
- The diagnostic message includes DMT symbols such that each symbol includes only one bit and there is at least one identical symbol that includes that same bit.

Dkt. No. 339-2 at ¶80. Dr. Cimini believed that the Term fits most closely with his first interpretation. Ex. 2 (Cimini Dep. Tr.) at 268:25-269:5 (“Q. ... Is – is there one of these three bullet points that you believe (sic) is the proper construction of the claim language? A. ... It fits with the first one.”). That is the interpretation Dr. Cimini applied for invalidity purposes (Dkt. No.

339-2 at ¶80) and the interpretation TQD’s expert, Dr. Brody, applied. Dkt. No. 347-5 at ¶246. Whether the Term also encompasses Dr. Cimini’s second interpretation is irrelevant to this Motion.

Contrary to CommScope’s argument, Dr. Cimini conceded the Term reads on modulation using “one bit per DMT symbol like C-Rates.” Ex. 2 at 257:17-21. He also conceded his third bullet both reads on the VDSL2 standard (*id.* at 272:21-22) and also falls within first bullet. *See id.* at 282:14-18 (“Q. Okay. So isn’t fair to say that the way you’ve written bullet 1 and bullet 3, that bullet 1 can also include where the same bit, the same single bit is being transmitted on multiple DMT symbols? A. Yes, I think so.”). Given his admission, there is no genuine dispute that the Term reads on the standard. CommScope also makes arguments unsupported by competent evidence. *See e.g.*, Dkt. No. 380 at p. 5 “[A]ttorney arguments, with no affirmative evidence, are insufficient.” *Suffolk Techs., LLC v. AOL Inc.*, 752 F.3d 1358, 1367 (Fed. Cir. 2014).

#### **b) VDSL2 Demonstrates The “Idle Channel Noise” Limitation**

The VDSL2 standard describes a variable called “quiet line noise.” Although CommScope acknowledges that TQD’s expert, Dr. Brody, opined that “a POSITA to ‘understand that quiet line noise in the VDSL2 standard is [the claimed] idle channel noise,’” CS’s attorneys argue for the first time, without citation, that “idle channel noise information” and “quiet line noise” are different. Dkt. No. 380 at p. 6. “Without expert testimony, however, [CS]’s position is mere attorney argument” “[a]nd here, those attorney arguments are insufficient to undermine the credible testimony from [TQD]’s expert that” quiet line noise in the VDSL2 standard is the claimed idle channel noise. *Suffolk Techs.*, 752 F.3d at 1367. This is not a genuine dispute of material fact.

### **2. The Accused Products Do, in Fact, Practice the Family 1 Patent Claim**

#### **a) The Accused Products Meet Limitation 36[a]**

CommScope argues that “Dr. Cooklev’s [source] code [analysis] does not show how ‘the software receives anything from the central office (CO), not (sic) does it show when the accused

system would receive a G.994.1 handshake Mode Select message.” Dkt. No. 380 at p. 7. This does not raise a genuine dispute. In his source code analysis, Dr. Cooklev identified the specific instructions that when executed receive a G.994.1 handshake Mode Select message (i.e., the claimed “initiate diagnostic mode message”) from the CO. *See* Ex. 3 at ¶¶676 and 685.

**b) The Accused Products Meet Limitation 36[b]**

For the limitation “DMT symbols that are mapped to one bit of the diagnostic message,” CommScope advances the same arguments made for VDSL2. *See* Dkt. No. 380 at p. 8. As explained above and by Dr. Cimini, the plain meaning reads on mapping one bit per DMT symbol. Dr. Cimini has not opined that the plain meaning does not read on the source code analyzed by Dr. Cooklev and relied on by Dr. Brody. Accordingly, CS has not shown a genuine dispute exists.

**c) The Accused Products Meet Limitation 36[d]**

CommScope argues that “[w]ithout any technical basis for doing so, Dr. Brody simply concludes that the claimed idle channel noise information is equivalent to QLN information.” CS mischaracterizes his testimony. He found “frequency domain received idle channel noise information” reads on VDSL2 idle channel noise. *See* Dkt. No. 347-5 at ¶¶266-270. CS’s expert does not dispute this point, and its attorney argument should be accorded no weight.

**B. The Court Should Grant TQ Delta’s Motions for the Family 10 Patent Claim**

**1. CommScope Misconstrues the Court’s Construction of “Operable to”**

CommScope argues that the “operable to” language requires evidence the infringing ROC functionality was turned on when the products were sold. But that is not how the Court construed “operable to.” D.I. 380 at p. 14. The Court construed “operable to” as “configured to.” Citing *Versata*, the Court made clear that activating functionality already present in the underlying source code is within the meaning of “operable to.” D.I. 169 at p. 22. A device is “operable to” perform functionality even if that functionality is not currently enabled (or enabled by default) if it can be

enabled without “rebuilding source code or redesigning integrated circuit chips.” TQD has substantial, un rebutted evidence that is the case.

## 2. The Evidence Shows that the Accused Products Infringe

CommScope asserts that “TQ Delta has failed to adduce any evidence establishing that the CommScope Accused Products are *configured* with optional ROC mode enabled.” D.I. 380 at p. 9. But, as explained *supra*, ROC mode need not be enabled to infringe. Rather, the products need only include the necessary hardware and software required for ROC mode, which they do.

TQD has shown that the Accused Products are sold with the necessary hardware and software required to implement ROC mode. CommScope responds by stating that compliance is not enough because the functionality is optional. That functionality is, hypothetically, optional is not a defense when there is evidence demonstrating that the products in fact implement that option. Broadcom, the designer of the DSL chipset for the Accused Products, testified the optional functionality is included with and implemented in such DSL chipsets. CS did not have a coherent or substantive response to this, asserting only that “CommScope disputes fact 19 as the cited testimony does not ‘confirm[] that the BCM63168 and BCM63148 DSL chips support single latency VDSL with ROC mode and G.INP’” without any further explanation. *See* D.I. 380 at p. 4. But CS has also admitted that it does not know how the chips work. *See* Ex. 4 (Ben Miller Dep. Tr. 09-20-18) at 197:12-17 (“[REDACTED]”).

Since CS also admits that it “has no ability to modify how Broadcom’s DSL chipsets function with respect to the accused functionality[,]” Broadcom’s testimony is undisputed evidence the Accused Products include the necessary hardware and software to implement for ROC.

CommScope suggests that it can set its own parameters in the products and that somehow trumps the source code. *See* D.I. 380 at 3 (“While [CS] cannot access Broadcom’s source code, it

is undisputed that [CS] has its own source code and is able to set its own parameters.”). However, CS’s expert, confirmed CS’s “own source code” shows its products implement ROC. *See* Dkt. No. 347-13 at 137:9-13. Although CS criticizes Dr. Cooklev’s testing, testing was unnecessary to prove infringement here. *See* D.I. 347 at 16. And CS’s claim that TQD lacks “specific source code citations” demonstrating Modes 1 and 2 (D.I. 380 at 11) is diminished by its own expert. *See* Ex. Dkt. No. 347-13 at 137:9-13 (“[REDACTED]”).

### **C. Motion for Summary Judgment of No Invalidity for Family 10**

TQD moved to strike Mr. Lanning’s Report. Dkt. No. 338 (the “MTS”). If the Court grants this MTS, CS cannot meet its burden without an expert. In response, CS rehashes its opposition to the MTS. Dkt. No. 380 at 14-16. TQD addresses those arguments in its MTS briefing. CS also argues there is no “requirement that a prior art reference be accompanied by expert testimony” because the Patent “can be readily understood without the need for expert testimony.” *Id.* at 15-16. But CS has two technical experts who both testify a POSITA has “a bachelor’s degree in electrical or computer engineering [and years of experience] a Master’s degree in [E.E. (with same)], or a Ph.D. in [E.E. (with same)]” Ex. 5 at 10-12; Dkt. No. 347-17 at 14-15.

CommScope cannot claim expert testimony is unnecessary when its own experts have set a high level of skill in the art. *See Alexsam, Inc. v. IDT Corp.*, 715 F.3d 1336, 1348 (Fed. Cir. 2013) (“[B]oth sides believed it necessary to introduce extensive expert testimony.... Expert testimony was required not only to explain what the prior-art references disclosed, but also to show ... motivate[ion] to combine”); *see also BlephEx, LLC v. Myco Indus., Inc.*, 24 F.4th 1391, 1403 (Fed. Cir. 2022). CS’s cases involve far simpler art: vehicle comparisons, hitch pin locks, and food packaging. If the Court grants TQD’s MTS, CS will not have expert testimony to support its invalidity claims, and the Court should grant summary judgment of no invalidity.

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Respectfully Submitted,

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**CERTIFICATE OF SERVICE**

The undersigned certifies that the foregoing document and all attachments thereto are being filed electronically in compliance with Local Rule CV-5(a). As such, this document is being served this January 19, 2023 on all counsel of record, each of whom is deemed to have consented to electronic service. L.R. CV-5(a)(3)(A).

/s/William E. Davis, III  
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